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A

L E T T E R

TO THE

EDINBURGH

S O C I E T Y

CONCERNING THE

M E T H O D

OF MANAGING

OUTFIELD GROUND.

BY A FARMER.

EDINBURGH:

M.DCC.LXIII.



A
L E T T E R
T O T H E
E D I N B U R G H S O C I E T Y .

GENTLEMEN,

I HAVE observed, with much satisfaction, the proceedings of the EDINBURGH SOCIETY for the improvement of our country; it is the duty of every individual to contribute his endeavours for promoting an undertaking so national and so praise-worthy; with this view it is, that I beg leave to communicate to the SOCIETY some observations on Agriculture, which are the result of experience, and which seem of no inconsiderable moment to SCOTLAND.

My purpose is to point out a general and most fatal error in the system of Agriculture, which prevails in Scotland among the common Farmers, and to suggest a plain method for cor-

recting this error without any new expence whatever : what I shall observe particularly respects the County of Air, in which my residence is, but it will, I am afraid, be too applicable to many other Counties in Scotland.

The County of Air contains forty-five parishes ; of these parishes there may be fifteen, which, of late years, have been principally appropriated to the raising of cattle, and kept mostly in grass, so that they do not properly fall under the alterations proposed, and will not be counted upon in this scheme.

In each of the remaining thirty parishes there are, on an average, 1000 acres of OUTFIELD land ; I mean ground that has never been manured or otherways improved, and has, for ages past, been ploughed and cropt with oats for three years, then suffered to rest for three years, and then ploughed and cropt again in the same course, in a perpetual rotation ; so that 500 acres of that OUTFIELD land in each parish is yearly under tillage.

Under the denomination of OUTFIELD, I do not comprehend *Flooded-ground*, or ground lying contiguous to meadows, or on sides of burns and rivers, commonly term'd *Holming-ground*, which, by reason of its natural fertility, consisting of loam, may, without very great detriment, endure an imperfect and ill-judged culture ;

ture ; neither do I comprehend under the denomination of **OUTFIELD** ground those grounds, which, by means of their situation, accidentally receive manure from the soil washed down by land-floods from the heights. There will therefore fall under consideration (after leaving out the fifteen parishes before mentioned) of **OUTFIELD** ground, in the County of Air, no less than 30,000 acres.

I propose *first* to show, that a Farmer in Airshire is indeed a loser by ploughing this **OUTFIELD** ground, according to the method, universally practised, or, in other words, that the crops, reaped from such grounds, are not sufficient to pay feed, labour and rent.

To those who reside in more fertile Counties, or where better methods of cultivation are established, this assertion may seem strange, but it must be observed, that, in the County of Air, the yearly produce from a Scots Acre of **OUTFIELD** (one year with another) will not, at an average, exceed sixteen Winchester bushels (or two English quarters) of Oats.

Let me then enquire what those sixteen bushels of oats cost the Farmer.

To each Scots acre there must be allowed, for feed, six Winchester bushels (or twelve of our pecks) ; this brings down the yearly produce to ten bushels ; some Farmers indeed sow less, especially

especially in the first and third years ploughing, but then the produce is proportionally smaller.

The ploughing and harrowing each acre cannot be accounted at less than six bushels, or eight shillings Sterling.

The value of the straw, produced from a multitude of small sheaves of very short and weak corn, will not be found to exceed the expence of gathering, binding, and threshing; and the value of the Orts, or *Out-dightings*, will not defray the carriage to mill and market of what comes to be disposed of in that way.

Thus, out of two quarters, only four bushels, or eight pecks, remain, and this will be found to be more than exhausted by the expence of shearing, and by the rent payable to the master; so that, in this view of things, the Farmer gains nothing by this OUTFIELD ground; on the contrary, as it must be remembered, that the grass of all the OUTFIELD ground, under tillage, by this method of culture, is lost; and, as each acre of that grass, taking the whole promiscuously together, cannot be valued at less than two shillings Sterling an acre, the annual loss on 15,000 acres is no less than 1500 l. Sterling.

I shall now, in the *second place*, show that this OUTFIELD ground might, by the Tenants that possess them, and with the same stock they have,

be

be so improved, in the course of a few years, as to produce a very considerable increase of grain to the country.

It must be allowed, that every Tenant, possessed of a plough-gang of land, that is, one who has work for four horses, ploughs and sows twenty acres yearly of this OUTFIELD ground; whether this proportion be just or not in the division of the whole OUTFIELD ground in the County is not material to the present disquisition.

Instead of ploughing twenty acres I would advise him to plough no more than five acres: let his savings under this article be considered:

To 8 s. sterling for each of the 15 acres, ploughed less than usual, being the expence of ploughing and harrowing, is,	6	0	0
To six bushels of oats, (or twelve pecks) the seed he was to have sown on each acre of the 15 acres, at 8 d. per peck,	6	0	0
To fifteen acres of grass, at 2 s. sterling per acre that his pasture has increased, by his ploughing only five acres,	1	10	0
To expence of reaping 15 acres, at 2 s. 6 d. each,	1	17	6
	<hr/>		
Total so saved,	15	7	6
N. B. There			

N. B. There is no great difference betwixt the reaping one acre of this thin corn (which is very troublesome to gather in) and an acre of ~~erect~~ ^{erect} corn, yet I have made the calculation one fourth less.

It may be objected, that a Farmer, who has servants and horses, saves nothing by not employing them; so that, if he has the means of ploughing twenty acres, he saves nothing under those articles by ploughing no more than five acres.

It is answered, that, if he could plough and harrow fifteen acres more than he has to do in his own farm, he will be able to work to others, to that extent; or, should he not be employed that way, I would not confine horses and servants to that single part of Husbandry, but recommend any work that may procure them an equal or greater return; and it will be found, on examination, that there is scarcely one Tenant in Scotland, who may not employ his servants and horses, with evident advantage, either in his own work, or in assisting his neighbours or master.

Thus then the Farmer has a saving of 15 l. 7 s. 6 d. on the fifteen acres which he has left untilled.

This will purchase and lay down upon the five acres of OUTFIELD ground, to be ploughed in 1763, 1845 bushels of lime, at 2 ⁸/₉ per bushel,

2 ¹/₂ s.

or,

8d.

[9]

or, 8 q per boll. that is, to the amount of 368 bushels, or 92 bolls, per acre.

If the lime be got for $1\frac{1}{2}$ d. the bushel, which will be the case in most of our high grounds, the sum above will purchase 2460 bushels of lime, which is 615 bushels, or 123 bolls, for each acre of the five acres.

From the five acres, thus limed, a crop may be expected, in the year 1763, of 40 bushels each 1763. acre, which makes, for the five acres, 25 quarters, or Shire of Air bolls, out of which deduce 10 quarters for seed, to be sown the next year, remains 15 quarters to the Tenant: this, at the conversion of 10 s. 8 d. per quarter, is 8 l. sterling.

It may be objected, that this calculation is high for the first crop of limed ground; but as, in the following years, the produce will be calculated no higher, it is thought it will be found a reasonable medium for the crops of three years.

It is proposed, that, in the year 1764, the Farmer shall plough the five acres already mentioned, and five acres more of the twenty, for which he has the following funds: 1764.

To profit of the 5 acres, crop 1763,	1. 8	0	0
To grafs of 10 acres remaining unplow'd,	1	0	0
To saved by not plowing these 10 acres,	4	0	0
To saved by not cutting down 10 acres,	1	5	0

Saved,	14	5	0
B		This	

This sum will purchase, and lay down on the second five acres, 1710 bushels of lime, at 2 d. per bushel, which is 342 bushels the acre, or, if bought at $1\frac{1}{2}$ per bushel, this sum will purchase 2280 bushels, which is 456 bushels to be laid on each acre.

N. B. It is to be considered, that the Farmer is to take the best of his OUTFIELD ground under this new management the first two years, so as the produce may be as large as he can make it, while the funds are at the smallest, which, as will be seen by what follows, is the case for the first and second year of this improvement.

1765. It is proposed, that, in the year 1765, the Farmer shall plough the ten acres already mentioned, and five acres more of the twenty : for this he has the following funds :

To produce of the ten acres, at five

Airshire bolls, or five English quarters, the acre, after leaving in the Farmer's hands 15 bolls for his seed, there remains 35 bolls, at 10 s. 8 d.

per boll, 1. 18 13 4

To the grafs of 5 acres still unplow'd 0 10 0

To saved by not plowing these 5 acres, 2 0 0

To saved by not being obliged to reap

these five acres, 0 12 6

Saved, 21 15 10

This

This sum will buy, and lay down upon the ground 400 bushels of lime for each acre of the five that is to be limed this year, being 3 l. 6 s. 8 d. sterling, at 2 d. per bushel or 16 l. 13 s. 4 d. sterling for the whole of the five acres, and there will afterwards remain in the Tenant's hands 5 l. 2 s. 6 d. sterling which should be employed in buying grass-seeds and a little dung, or other manure, for the poorest parts of the first five acres limed, which should be laid down into grass this year; and it may be left to the Farmer to make what part he pleases a barley or oat crop, as either does well in laying down ground with grass-seeds, and, should any part appear to fail, a little superficial manure, which, before this time, can be spared by the increase of straw from the new improvements, will bring the poorest parts of these five acres equal with the rest.

The last five of the twenty acres come now to 1766.

be taken in hand, and the Farmer has for improvement, the produce of fifteen acres, at five bolls the acre, which is 75 bolls, out of which deduce, for next year's seed, 15 bolls, there remains 60 bolls, at 10 s. 8 d. per boll, is 1. 32 0 0
To this must be added 40 s. sterling,

saved to the Farmer in work, by his

not ploughing the first five acres,

which is cut in hay, 2 0 0

—————

34 0 0

B 2

Out

Brought over, l. 34 0 0

Out of this is to be deducted 50 s.

sterling for each acre of the second five acres brought under improvement, so as the Farmer may be able to give it some new manure, and lay it down with grass-seed, 12 10 0

Saved by the Tenant at the end of the

crop 1766, 21 10 0

This sum of 21 l. 10 s. with the produce of the first five acres, that was sown with grass-seeds, last year, and may be supposed to yield 30 s. sterling per acre, as hay, is . . . 7 10 0

29 0 0

The increase of straw that must arise from the crops of the new improved ground will answer the expence of cutting down and threshing, and the foggage of the hay-field will pay for cutting and making of the hay.

1767. In this year 1767, the Farmer is to begin with his other twenty acres of OUTFIELD land which, for these four years, must have been lying in grass, so that his pasture has been no ways decreased, and those remaining twenty acres must

be

be as fit or fitter for improvement than ever he had them.

The balance in the Farmer's hands,

crop 1766, is, l. 29 0 0

Deduce for seed, for ten acres of the

first twenty acres still in grain, ten

bolls, at 10 s. 8 d. 5 6 8

23 13 4

Also to be deduced five bolls for seed

for the first five acres of the second

twenty, at 10 s. 8 d. 2 13 4

21 0 0

Also deduce 2 s. per acre for the grass

of the five acres, that the Tenant

was short in his pasture, by his old

method, 0 10 0

20 10 0

This 20 l. 10 s. sterling will buy 2460 bushels of lime, or 615 bolls, which being laid out on the first five acres of the second twenty acres, it will produce, as before, five bolls the acre, which comes to 25 bolls.

The ten acres of the first twenty being still in grain, is 50 bolls.

In all 75 bolls, at 10 s. 8 d. 40 0 0

The

	Brought over	l. 40	0	0
The hay of the first and second laid down five acres, is ten acres, at 30 s. sterling the acre,		15	0	0
		<hr/>		
		55	0	0
To be deduced for grafs-seeds for the third five acres of the first twenty acres, at 20 s. per acre,		5	0	0
		<hr/>		
Of crop 1767 there remains in the Tenant's hands,		50	0	0

1768.	In the year 1768 the Tenant is to continue, and greatly increase his improvement, by liming ten acres more of the second twenty acres, as he has in his hands 50 l. sterling, out of which deduce ten bolls for seed for these ten acres, and five bolls for seed for the last five acres of the first twenty acres; also five bolls for the first five acres of the second twenty, all to be ploughed this year, in all twenty bolls, 10 l. 13 s. 4 d.			
	Remains,	39	6	8
	Deduce for grafs-seeds, for laying down the last five acres of the first twenty acres this year,	5	0	0
		<hr/>		
	Remains	34	6	8

And,

And, as an allowance for the Tenant's wanting fifteen acres of pasture, according to the old method, he is allowed to pasture the first five acres laid down with grafs-seeds.

The foresaid 34 l. 6 s. 8 d. sterling will buy 4120 bushels of lime, or 1030 bolls, to be laid on the ten acres to be improved this year, at the rate of 103 bolls per acre; and the produce of twenty acres of grain this year, at five bolls the acre, is 100 bolls, which, at 10 s. 8 d. per boll, is, l. 53 6 8

To which add the produce of the

second and third five acres of hay, 15 0 0

There will remain in the Tenant's

hand, for crop 1768, 68 6 8

This sum will enable the Tenant, in the 1769. crop 1769, not only to take in the remaining five acres of the forty, but to enrich any parts of the whole acres of the forty that he sees may need it, and the increase of his manure will be a great addition to the keeping of these lands in good order, and he will have it in his power either to inclose and divide these lands into inclosures, or pay his master for so doing; and when the lands are so improved, if the Tenant will only plough one third yearly, so as two thirds may be always in grafs, and never broke up and ploughed,

ploughed, without being six years in grass, it will not be in his power to hurt the improvements made: on the contrary, the lands will grow richer, though they receive no new manure; but, as he will soon see the advantage of making them richer, and being able to do it, there is no doubt, but that he will put them into the best order in his power; and, at the most moderate calculation, we may suppose always one third of the lands so improved may be ploughed yearly, and will produce at least five English quarters each acre; so that, if all the Farmers in the county were to follow this plan proposed, in the year 1768, the whole **OUTFIELD** land would be improven, which is at least 30,000 acres of land, one third of which being 10,000 acres must produce 50,000 bolls of victual yearly, that the Tenants can carry to market more than they did before, which, at 10 s. 8 d. ster-

ling, amounts to l. 26,666 13 4

Besides, there is 20,000 acres of sown grass in the County, more than ever was before, which, at a reasonable value, may be valued at 5 s. sterling each acre; and deducing 2 s. per acre, the old price of the **OUTFIELD**-land grass for the 15,000 acres, that lay in grass yearly, there remains, . . .

3500 0 0

Which

Which makes an additional income to the County, the year 1769, of . . . 1. 30,166 13 4

If any thing fall short of the plan and calculations, it will be the produce of the first ten acres improved, when the lands may be poor in their nature, and when the funds are smallest : but when a Master is satisfied with the uprightness of his Tenant's designs, he will surely not scruple to advance him a little money, for two or three years, especially as he has next to a certainty of his being repaid, and the lands made better.

The improvements will likewise answer to better purpose, if the lands be inclosed and divided ; this also the Master should encourage and promote as early as he can, and not take too high interest for what he lays out.

If this improvement of the country took many years to make it effectual, I should despair of the execution ; but, as the scheme is plain, and may be understood by the meanest capacity, and the whole may be executed in the space of six or seven years ; and, as much depends on the Landlords to prevent the Tenants from going on in their erroneous method, and to en-

C

courage

courage them in carrying on the new plan (if it is approved of by men of judgment and skill in agriculture) we may soon hope to see it brought into execution.

I could point out many other advantages that would attend this reformation in the labouring of land, but will only suggest one thing, that, from experience, I know might be made effectual, and keep a very considerable sum in the country, that annually goes out of it.

What I mean is this, as the West of Scotland yearly brings from England, Ireland, and other places, great quantities of cheese and butter, the increase of pasture by sown grass would infallibly augment the produce of those two articles.

It would surprise the Society to know, to what extent those commodities are brought in upon us : nothing is wanting to stop it, but to raise abundance of grass for milk-cows. What has been formerly proposed will lead the Tenants effectually into such methods ; and, by recent experience, we find, that we can make butter and cheese as good in Scotland as any where, so that nothing but our negligence hurts us.

If

If what has been suggested in this letter may prove useful to my country, it will give great pleasure to one who is most heartily an improver, and who thinks himself honoured in bearing the name of

Airshire,
January, 1763.

A FARMER.

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